WETLAND DETERMINATION DATA FORM - Great Plains Region

Project/Site: L3R City/County: Marshall Sampling Date: 2015-06-05

Applicant/Owner: Enbridge State: Minnesota Sampling Point: w-156n46w34-f2

Investigator(s): ACM/KRG Section, Township, Range:

Landform (hillslope, terrace, etc.): talf Local Relief (concave, convex, none): linear l... Slope (%): 0-2

Subregion (LRR or MLRA): Latitude: 48.2934203278... Longitude: -96.55103199...

Datum: Minnesota State Plane North, NAD 83 (2011) U.S. feet

Soil Map Unit Name: I65A NWI Classification:

Are climatic/hydrologic conditions on the site typical for this time of year? (if no, explain in Remarks): Yes

Are Vegetation No, Soil No, or Hydrology No significantly disturbed? Are "Normal Circumstances" present? Yes

Are Vegetation No, Soil No, or Hydrology No naturally problematic? (If needed, explain any answers in Remarks)

SUMMARY OF FINDINGS - **Attach site map showing sampling point locations, transects, important features, etc.**

Hydrophytic Vegetation Present?	Yes	**Is the Sampled Area**	
Hydric Soil Present?	Yes	**within a Wetland?**	Yes
Wetland Hydrology Present?	Yes	If yes, optional Wetland Site ID:	

Remarks: (Explain alternative procedures here or in a separate report.)

The wetland is a wet aspen forest adjacent to crop fields.

VEGETATION - Use scientific names of plants.

Tree Stratum (Plot Size: 30)	Absolute % Cover	Dominant Species?	Indicator Status
1. Populus tremuloides	75.00	Yes	FAC
2.			
3.			
4.			
	75 = Total Cover		
Sapling/Shrub Stratum (Plot Size: 15)			
1. Corylus americana	20.00	Yes	UPL
2. Cornus racemosa	15.00	Yes	FAC
3. Cornus alba	10.00	No	FACW
4. Amelanchier alnifolia	10.00	No	FACU
5. Prunus virginiana	5.00	No	FACU
	60 = Total Cover		
Herb Stratum (Plot Size:)			
1. Rubus pubescens	60.00	Yes	FACW
2. Maianthemum canadense	15.00	No	FACU
3. Toxicodendron rydbergii	5.00	No	FACU
4. Ribes americanum	5.00	No	FACW
5. Anemone quinquefolia	5.00	No	FAC
6. Galium triflorum	2.00	No	FACU
7. Rosa blanda	2.00	No	FACU
8. Calamagrostis canadensis	2.00	No	FACW
9. Zizia aurea	2.00	No	FAC
10. Thalictrum dioicum	2.00	No	FACW
	100 = Total Cover		
Woody Vine Stratum (Plot Size: 30)			
1. Vitis riparia	2.00	No	FAC
2.			
	2 = Total Cover		

% Bare Ground in Herb Stratum

Dominance Test worksheet:

Number of Dominant Species That Are OBL, FACW, or FAC: 3 (A)

Total Number of Dominant Species Across All Strata: 4 (B)

Percent of Dominant Species That Are OBL, FACW, or FAC: 75 (A/B)

Prevalence Index worksheet:

Total % Cover of:		Multiply by:	
OBL species	0.00	x 1	0
FACW species	79.00	x 2	158
FACU species	99.00	x 3	156
UPL species	20.00	x 4	100
Column Totals	237 (A)		711 (B)

Prevalence Index = B/A = 3

Hydrophytic Vegetation Indicators:

- 1 - Rapid Test for Hydrophytic Vegetation
- yes 2 - Dominance Test is > 50%
- yes 3 - Prevalence Index is ≤ 3.0[1]
- 4 - Morphological Adaptations[1] (Provide supporting data in Remarks or on a separate sheet)

Problematic Hydrophytic Vegetation[1] (Explain)

[1] Indicators of hydric soil and wetland hydrology must be present, unless disturbed or problematic.

Hydrophytic Vegetation Present?

Remarks:

The sample point has a canopy dominated by quaking aspen with an understory of hazelnut, gray dogwood, and dwarf raspberry.

SOIL

Sampling Point: w-156n46...

Profile Description: (Describe to the depth needed to document the indicator or confirm the absence of indicators.)

Depth	Matrix		Redox Features					
(inches)	Color (moist)	%	Color (moist)	%	Type[1]	Loc[2]	Texture	Remarks
0-12	10YR 2 1	100					sil	
12-18	10YR 4 1	98	10YR 5 6	2	C	M	scl	

[1]Type: C=Concentration, D=Depletion, RM=Reduced Matrix, MS=Masked Sand Grains.

[2]Location: PL=Pore Lining, M=Matrix.

Hydric Soil Indicators:

- ☐ Histosol (A1)
- ☐ Histic Epipedon (A2)
- ☐ Black Histic (A3)
- ☐ Hydrogen Sulfide (A4)
- ☐ Stratified Layers (A5)
- ☐ 1cm Muck (A9) (**LRR F, G, H**)
- ☐ Depleted Below Dark Surface (A11)
- ☑ Thick Dark Surface (A12)
- ☐ Sandy Mucky Mineral (S1)
- ☐ 2.5cm Mucky Peat or Peat (S2)(**LRR G, H**)
- ☐ 5cm Mucky Peat or Peat (S3) (**LRR F**)
- ☐ Sandy Gleyed Matrix (S4)
- ☐ Sandy Redox (S5)
- ☐ Stripped Matrix (S6)
- ☐ Loamy Mucky Mineral (F1) **(LRR K, L)**
- ☐ Loamy Gleyed Matrix (F2)
- ☐ Depleted Matrix (F3)
- ☐ Redox Dark Surface (F6)
- ☐ Depleted Dark Surface (F7)
- ☐ Redox Depressions (F8)
- ☐ High Plains Depressions (F16) (**MLRA 72 & 73 of LRR H**)

Indicators for Problematic Hydric Soil[3]:

- ☐ 1cm Muck (A9) (**LRR I, J**)
- ☐ Coast Prairie Redox (A16)(**LRR K, L, R**)
- ☐ Dark Surface (S7) (**LRR G**)
- ☐ High Plains Depressions (F16) (**LRR H outside of MLRA 72 & 73**)
- ☐ Reduced Vertic (F18)
- ☐ Red Parent Material (F21)
- ☐ Very Shallow Dark Surface (TF12)
- ☐ Other (explain in remarks)

[3]Indicators of hydrophytic vegetation and wetland hydrology must be present, unless disturbed or problematic.

Restrictive Layer (if present): ☐

Type: _____

Depth (inches): _____

Hydric Soil Present? Yes

Remarks:

Soils are black silty loam above depleted sandy clay loam. The profile meets hydric indicator A12.

HYDROLOGY

Wetland Hydrology Indicators:

Primary Indicators (minimum of one is required; check all that apply)

- ____ Surface Water (A1)
- ____ High Water Table (A2)
- yes Saturation (A3)
- ____ Water Marks (B1)
- ____ Sediment Deposits (B2)
- ____ Drift Deposits (B3)
- ____ Algal Mat or Crust (B4)
- ____ Iron Deposits (B5)
- ____ Water-Stained Leaves (B9)
- ____ Inundation Visible on Aerial Imagery (B7)
- ____ Salt Crust (B11)
- ____ Aquatic Invertebrates (B13)
- ____ Hydrogen Sulfide Odor (C1)
- ____ Dry-Season Water Table (C2)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where not tilled**)
- ____ Presence of Reduced Iron (C4)
- ____ Thin Muck Surface (C7)
- ____ Other (Explain in Remarks)

Secondary Indicators (minimum of two required)

- ____ Surface Soil Cracks (B6)
- ____ Sparsely Vegetated Concave Surface (B8)
- ____ Drainage Patterns (B10)
- ____ Oxidized Rhizospheres on Living Roots (C3) (**where tilled**)
- ____ Crayfish Burrows (C8)
- ____ Saturation Visible on Aerial Imagery (C9)
- ____ Geomorphic Position (D2)
- ____ FAC-Neutral Test (D5)
- ____ Frost-Heave Hummocks (D7) (**LRR F**)

Field Observations:

Surface Water Present? No Depth (inches) _____

Water Table Present? Yes Depth (inches) 14

Saturation Present? Yes Depth (inches) 12

(includes capillary fringe)

Wetland Hydrology Present? Yes

Describe Recorded Data (stream gauge, monitoring well, aerial photos, previous inspections), if available:

Remarks:

The soils are saturated at 12 inches.

Site Photograph 1

Sampling Point: w-156n46w34-f2